

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: **Bang, et al.**

Serial No.: **10/081,312**

Examiner: **Turocy, David P.**

Confirmation No.: **6198**

Title: **METHOD OF FORMING A
CORROSION RESISTANT COATING**

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Case: **2929D1/TCG/PMD/LE**

Filed: **February 21, 2002**

Group Art Unit: **1762**

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

REPLY BRIEF

Appellants, in accordance with 37 C.F.R. §1.193 and M.P.E.P. §1208.02 and in response to the Examiner's Answer dated September 20, 2006, hereby submit this Reply Brief to the Board of Patent Appeals and Interferences. Although Appellants believe that no fee is due in conjunction with this response, the Commissioner is hereby authorized to charge any fees necessary to make this reply timely and acceptable, including extension of time fees under 37 C.F.R. §1.136, to Deposit Account No. 20-0782.

REPLY

Appellants submit the following remarks in response to the Examiner's Answer dated September 20, 2006, in further support of the arguments presented in the Applicants' principal brief. Specifically, Appellants believe Examiner's Answer repeatedly misconstrues the teachings of *Toyoda*, *Ohashi*, *Itoh*, *Tomita* and *Morton*, combines teachings of the same in hindsight and has ignored limitations recited by the claims under appeal.

The Examiner asserts on page 19 of the Examiner's Answer that *Toyoda* suggests a desirability to seek process conditions that deposit a magnesium fluoride film having a purity as high as possible. The Examiner asserts that since *Toyoda* uses a target having a purity of 99.5%, then *Toyoda* teaches that the deposited film should have a high purity and that one of ordinary skill would seek-out appropriate process conditions to deposit such a magnesium fluoride film having a purity as high as possible. The Appellants disagree as there is no teaching in *Toyoda* regarding the purity of the deposited film or correlation between the relative purity of the target and the resultant deposited film. The purity of the target may be selected for any number of reasons, none of which are enumerated by *Toyoda*. The Examiner has expanded the teachings of *Toyoda* without support for his assertion that the mere presence of a target of a certain purity means that not only a corresponding purity of the deposited film is suggested, but motivation to seek a film with a purity as high as possible is provided. This interpretation is simply overreaching and unsupported by the *Toyoda* reference itself, or by any extrinsic evidence provided by the Examiner.

The Examiner additionally asserts on pages 20-22 of the Examiner's Answer that *Ohashi* suggests that a defect and pin-hole free film may be obtained by depositing a dense film. Appellants disagree as there is no teaching in *Ohashi* correlating the relative amounts of defects or pin holes in a deposited film to either the density or purity of the deposited film. Additionally, the Examiner is incorrect in his assertion that a denser, highly packed film would be expected to have fewer defects and pin holes because the number of defects and pin holes has not been established as being related to density. For example, a less dense film may have less pin holes than a denser film, while a highly packed film may have more defects than a less packed film. The Examiner's

reasoning that *Ohashi's* statement of a desirability for a defect and pin hole free film corresponds to a desirability for increased film density is solely that of the Examiner, as *Ohashi* or other references of record do not teach or suggest that an increase in film density results in reduced defects or less pin holes. Moreover, the Examiner's use of "at least 85%" as a density threshold is made through the use of hindsight reasoning, as *Ohashi* or other references of record are silent regarding the density of the applied film, and as such, clearly do not teach or suggest that a film density of "at least 85%" is desired. The Examiner's assertions regarding the teaching of *Ohashi* are overreaching and unsupported by the *Ohashi* reference itself, or by any extrinsic evidence provided by the Examiner, and that the asserted teaching of a specific density threshold is made in hindsight in view of the claimed invention.

The Examiner additionally asserts on page 22 of the Examiner's Answer that the combination of *Tomita* and *Morton* would inherently produce the claimed film. Appellants disagree as the use of *Toyoda* and *Ohashi* to provide motivation for the combination of *Tomita* and *Morton* to arrive at the claimed coating is flawed as discussed above and in the Appellant's primary brief. Moreover, the Examiner's statement that it would be obvious to use the combined temperature and pressure conditions respectively described in *Tomita* and *Morton* in a single deposition process is overreaching because it is not obvious to exchange control parameters between deposition processes having fundamentally different deposition techniques. Here, *Tomita* is an evaporative process, while *Morton* is a physical vapor deposition (PVD) process. As these two deposition processes are performed using fundamentally different deposition techniques, process equipment and process chemistries, the assertion that process parameters from an evaporative deposition process is suitable for a PVD process is overreaching when made without support from the references or other extrinsic evidence, and when based solely on the Examiner's conjecture.

"In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original); see also, MPEP §2112. Here, the use of a process parameter from an

evaporation process in a PVD process to obtain a film having properties not taught or suggest by the references clearly does not inherently disclose or suggest Appellants' invention. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. (see MPEP 2163.07(a)). Thus, the interpretation of *Tomita* and *Morton* as having the requisite motivation to combine to (inherently) produce the claimed film is unsupported.


With regard to the other assertions by the Examiner, the Appellants submit that the arguments presented in the primary brief address the assertions, and accordingly, the Appellants have omitted specific rebuttals for the sake of brevity.

CONCLUSION

Appellants submit that the cited references, alone or in combination, fail to teach, show, or suggest each of the elements or limitations expressly recited in Appellants' claims. More particularly, none of the cited references teach the claimed subject matter as discussed in the primary brief. Therefore, Appellants respectfully request the Board's reconsideration and reversal of the Examiner's rejection of claims 1-12, 14-15 and 18-19 in view of the arguments presented herein and in the primary brief.

Respectfully submitted,

Nov 20, 2006


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